



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION IX**

**75 Hawthorne Street**

**San Francisco, CA 94105-3901**

September 17, 2007

Tom Clements  
Public Affairs Officer  
Pacific Missile Range Facility  
P.O. Box 128  
Kehaha, Kauai, HI 96752-0128

**Subject:** Draft Environmental Impact Statement/Overseas Environmental Impact Statement (EIS/OEIS), Hawaii Range Complex, Hawaii (CEQ # 20070312)

Dear Mr. Clements:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our detailed comments are enclosed.

The Draft EIS/OEIS (herein DEIS) assesses the impacts of current and increased Navy training, and research and development activities in the Hawaii Range Complex, which includes 235,000 square nautical miles (nm) around the Main Hawaiian Islands and 2.1 million square nm of Temporary Operating Area of sea and airspace encompassing the Northwest Hawaiian Islands. The No-action Alternative evaluates the current level of Navy training in the range complex, which includes over 9,300 annual operations, including several Undersea Warfare Exercises per year and the biennial Rim of the Pacific exercise. Alternative 1 evaluates increased tempo and frequency of training and new training operations. Alternative 2 evaluates further increased tempo and training with increases of over 100% in the number of training operations over current training, increased research and development, and the addition of major exercises including training three Strike Groups simultaneously. The Navy's preferred alternative is Alternative 2.


Based on our review, we have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "Summary of Rating Definitions"). EPA has concerns regarding impacts to marine resources from the preferred alternative. We understand there is substantial uncertainty regarding the acoustic impacts to these resources, including the extent that mid-frequency active sonar use plays in marine mammal strandings. Such uncertainty suggests that a more precautionary approach be taken than what is described in the preferred alternative to fully protect marine resources.

A limited range of alternatives are evaluated in the DEIS. EPA recommends additional alternatives be formulated and evaluated in the Final EIS to meet the Navy's mission while maximizing environmental protection. We recommend different training combinations and

levels be included, including an alternative that describes a much more precautionary approach in relation to mid-frequency active sonar. If additional alternatives are not analyzed, EPA recognizes the No-action Alternative, which maintains training at current levels, to be the environmentally preferable alternative per 40 CFR 1505.2 (b) and recommends its selection to minimize environmental impacts.

EPA appreciates the opportunity to review this DEIS. When the Final EIS is released for public review, please send one copy to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3846 or Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or [vitulano.karen@epa.gov](mailto:vitulano.karen@epa.gov).

Sincerely,

*FOR*   
Nova Blazej, Manager  
Environmental Review Office

Enclosure: Summary of EPA Rating Definitions  
EPA's Detailed Comments

cc: Chris Yates, National Marine Fisheries Service

## **SUMMARY OF EPA RATING DEFINITIONS**

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

### **ENVIRONMENTAL IMPACT OF THE ACTION**

#### ***"LO" (Lack of Objections)***

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

#### ***"EC" (Environmental Concerns)***

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

#### ***"EO" (Environmental Objections)***

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

#### ***"EU" (Environmentally Unsatisfactory)***

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

### **ADEQUACY OF THE IMPACT STATEMENT**

#### ***Category 1" (Adequate)***

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

#### ***"Category 2" (Insufficient Information)***

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

#### ***"Category 3" (Inadequate)***

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

## **Alternatives and Purpose and Need**

The Draft Environmental Statement (DEIS) for the Hawaii Range Complex (HRC) states that the decision to be made by the Assistant Secretary of the Navy is to determine both the level and mix of training to be conducted and the range capability enhancements to be made within the HRC that best meets the needs of the Navy (p. ES-12). The alternatives evaluated in the DEIS do not contain a variety of levels and mixes of training and enhancements, however. The No-action Alternative represents the existing level of training; Alternative 1 consists of the exercises in the No-action Alternative with the addition of new training operations and an increased tempo and frequency of training; and Alternative 2 includes the same exercises as Alternative 1 with further increased tempo and training and substantial increases in the number of training operations including the addition of major exercises.

The Council on Environmental Quality (CEQ) Regulations for Implementing the National Environmental Policy Act (NEPA) states that the evaluation of alternatives is the “heart of the environmental impact statement” and that agencies should “rigorously explore and objectively evaluate all reasonable alternatives” to the proposed action (40 CFR 1502.14). Based on the purpose and need described in Chapter 1, it is not clear that all reasonable alternatives that would meet the Navy’s current and emerging training needs were included. The alternatives analysis of this DEIS would be improved by including alternatives that represented a more diverse level and mix of training instead of formulating alternatives that simply build upon one another. A more diverse range of alternatives would provide information to the decision-maker that could aid in selecting an alternative that meets the Navy’s most important training needs while meeting the intent of our national environmental policy (42 USC 4331- 4335).

*Recommendation:* In the Final EIS (FEIS), EPA recommends evaluation of additional alternatives that represent a more diverse level and mix of training and research/development activities. EPA recommends that the FEIS include a range of alternatives developed with reference to how well they meet immediate and future training needs. We recommend including an alternative that describes a much more precautionary approach in relation to the use of mid-frequency active sonar. We also recommend that the impacts of these alternatives be more clearly differentiated in the FEIS and presented in a comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public (40 CFR 1502.14). Consistent with this, we recommend that the amount of munitions use and their associated pollutants be quantified in the FEIS for all alternatives.

If additional alternatives are not analyzed in the FEIS, EPA recognizes the No-action Alternative, which maintains training at current levels, to be the environmentally preferable alternative per 40 CFR 1505.2 (b) and recommends its selection to minimize environmental impacts.

## Impacts from Mid-Frequency Active (MFA) Sonar

### *Considering Uncertainty in Impact Assessment*

We understand that there is a substantial amount of uncertainty in predicting impacts to marine mammals and fish from MFA sonar. We are concerned, however, that this uncertainty has not been fully considered in the assessment of significance<sup>1</sup>, and that more precaution is not being used to mitigate this uncertainty.

For example, we are aware that the Woods Hole Oceanographic Institution<sup>2</sup> expressed concern in the past regarding effects thresholds near 190 dB, citing a study<sup>3</sup> that reported significant behavioral responses in the North Atlantic right whale at 154 decibels (dB). Additionally, the 2006 Rim of the Pacific (RIMPAC) After Action Report (Appendix F) indicates that the National Marine Fisheries Service (NMFS) believed that the 190 dB sound exposure level (SEL) was “not sufficiently precautionary” and required the Navy to apply for its incidental harassment authorization for that exercise using 173 dB SEL (p. F-9). The DEIS indicates that the normal operating level for the Hawaii Range Complex (HRC) alternatives would be 235 dB and the preferred alternative includes 1,152 additional hours of MFA sonar (p. 4-19) and simultaneous multiple strike group training.

*Recommendation:* We recommend the FEIS consider the uncertainty and unknown risks in assessing significance of impacts from MFA sonar on marine resources. We recommend modifications to the preferred alternative to incorporate additional precaution and mitigation measures commensurate with this level of uncertainty.

### *Impacts to Fish*

The DEIS makes conclusions regarding impacts to fish that are not clearly supported by the discussion provided. For example, the DEIS concludes that impacts to fish would be minimal “considering the few fish species that would be able to detect sound in the frequencies of the proposed action” (p. 4-19). However, the DEIS states that species of tuna may be able to detect mid-frequency sounds (p. 3-14), and there are several tuna species present in open water in the project area (Table 3.1.2.2.1-1). An additional concern is that NMFS determined that overfishing was occurring Pacific-wide for one tuna species, the bigeye tuna (p. 3-11). The basis for the conclusion of negligible impacts is not clear and should be better supported or revised.

Additionally, the DEIS states that impacts to fish would be minimal because of the “limited exposure of juvenile fish with swim bladder resonance in the frequencies of the sound sources” (p. 4-19). The DEIS does not provide the swim bladder resonance of fish in the study area, which would depend on fish species, size and depth (p. 4-14), to offer the basis for the conclusion of negligible impacts in the DEIS.

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<sup>1</sup> The Council on Environmental Quality Regulations for Implementing NEPA state that “the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks” should be considered in evaluating significance (40 CFR 1508.27 (b) 5)

<sup>2</sup> In its comment letter on the Atlantic Undersea Warfare Training Range EIS Jan 27, 2006

<sup>3</sup> Available: <https://darchive.mblwhoilibrary.org/handle/1912/248>

*Recommendation:* Consider and discuss potential impacts to tuna species, especially the bigeye tuna, in the FEIS. If additional information regarding swim bladder resonance of fish in the study area is available, include and discuss it in the FEIS. If this information is not available, the conclusions regarding significance of impacts should be qualified and the uncertainty considered. EPA recommends additional precautions be included in the proposed action to safeguard marine resources.

## **Hazardous Waste Contamination**

### ***Pearl Harbor Contamination***

The Navy proposes a Demolition Exercise Area in the Middle Loch of Pearl Harbor, which has existing polychlorinated biphenyls (PCBs) and heavy metals contamination. The DEIS states that underwater detonations may create a crater and disperse the displaced bottom sediments into the water column (p. 4-370). We have concerns regarding potential mobilization of PCBs and other pollutants by underwater detonations and their spread into the shallow fringes of Middle Loch, especially if a detonation disturbs sediments more than a couple inches deep. The broad area of the Middle Loch has PCB levels which are just below levels which are of concern for exposure to waterfowl in shallow habitat (< 2 meters deep). Various heavy metals (cadmium, copper, mercury, and zinc) are present above levels of concern for a variety of ecological receptors in a broad area of the Loch. In addition, there is one sampling location near the east shore which has chlorinated pesticides (dieldrin and chlordanes) above levels of concern for fish.

Additionally, it is not clear whether the construction and operation of the Acoustic Test Facility (ATF) off Ford Island has the potential to mobilize existing sediment contaminants, including PCBs, heavy metals, and chlorinated pesticides, into the water column. There is an area of near shore samples just within the ATF on the southwest corner of Ford Island which has very high levels of PCBs (from 604 to 8448 parts per billion measured as the total of the NOAA 18 congeners). These same locations have zinc and chlorinated pesticides (dieldrin & endosulfan) above levels of concern. We have concerns regarding the potential disturbance of sediments in this small area along the shore because of the high probability that PCBs would be mobilized.

*Recommendation:* In the FEIS, include a discussion as to whether underwater detonations will mobilize existing contaminants into the water column and what effects this mobilization could have on environmental resources considering the information above. Clarify the potential that the ATF has to disturb contaminated sediments. We note that these exercises and enhancements are proposed in some of the less contaminated portions of Pearl Harbor, however additional mitigation measures should be considered that reduce sediment disturbance to the greatest extent practicable, including the reduction of the quantity of exercises performed. EPA also recommends the avoidance of soil disturbance on the southwest corner of Ford Island which contains high PCB contamination and request this be included in the mitigation measures in Chapter 6.

### ***Pollution Prevention***

Guidance issued by the CEQ on integrating pollution prevention in Federal planning and decisions under NEPA<sup>4</sup> states that Federal agencies should use every opportunity to include pollution prevention features in NEPA planning and decisions and reflect such considerations in their NEPA documents. The DEIS identifies the contamination from munitions, including oils, heavy metals, and chemical simulants, that will be left in the water column and sediments. The preferred alternative involves "substantial" increases of materials expended on sea ranges that include liquid and soluble hazardous constituents (p. 4-189).

Consistent with CEQ guidance, the FEIS should describe what actions the Navy is taking to reduce the introduction of pollutants during HRC activities. We strongly recommend that the Navy perform its training in a manner that minimizes the deposition of pollutants into soils and the water column, especially in those areas where waters do not meet water quality standards such as in Pearl Harbor. The DEIS notes that loadings of copper, nutrients, and leachate from anti-fouling paint used on ship hulls are of concern in Pearl Harbor (p. 3-225).

*Recommendation:* In the FEIS, identify measures that the Navy is taking to reduce pollutant loadings in soil and water resources. Commit to specific measures to reduce pollutant loadings in areas where waters do not meet water quality standards and include these mitigation measures in the FEIS and in the Record of Decision (ROD). EPA recommends that the Navy explore and discuss ways to reduce the deposition of liquid and soluble hazardous constituents into water resources for this project, especially the substantial increases under the preferred alternative.

### ***Depleted uranium***

The Pohakuloa Training Area (PTA) will be the site for Air to Ground Gunnery exercises, bombing exercises, and live-fire exercises (p. 4-442). We understand that traces of historic munitions containing depleted uranium have been found at an impact area at PTA.

*Recommendation:* The FEIS should identify whether ground disturbance will occur in impact areas that could contain depleted uranium, and assess the impacts to air resources and health and safety from such disturbance. Include an update of the Navy's efforts to address depleted uranium contamination at PTA and any other areas in the HRC. We recommend ground disturbance be avoided in areas that could contain depleted uranium.

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<sup>4</sup> *Pollution Prevention and the National Environmental Policy Act*, CEQ, January 12, 1993